

2021-06-16

Urban Logistics and Decarbonisation Practices in Ireland

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Recommended Citation

Zhang, X. & Valantasis Kanellos, N. (2021). Urban Logistics and Decarbonisation Practices in Ireland, *The Haulage Strategy Webinar*, 16 June 2021, Ireland.

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Urban Logistics & Decarbonisation Practices

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Haulage Strategy Webinar 16 June 2021

Outline of our talk



Urban Logistics

Concept
Stakeholders
Challenges



Urban Logistics Decarbonisation practices implemented in Ireland

Examples
Gaps and opportunities
Way forward

Part I: Urban Logistics

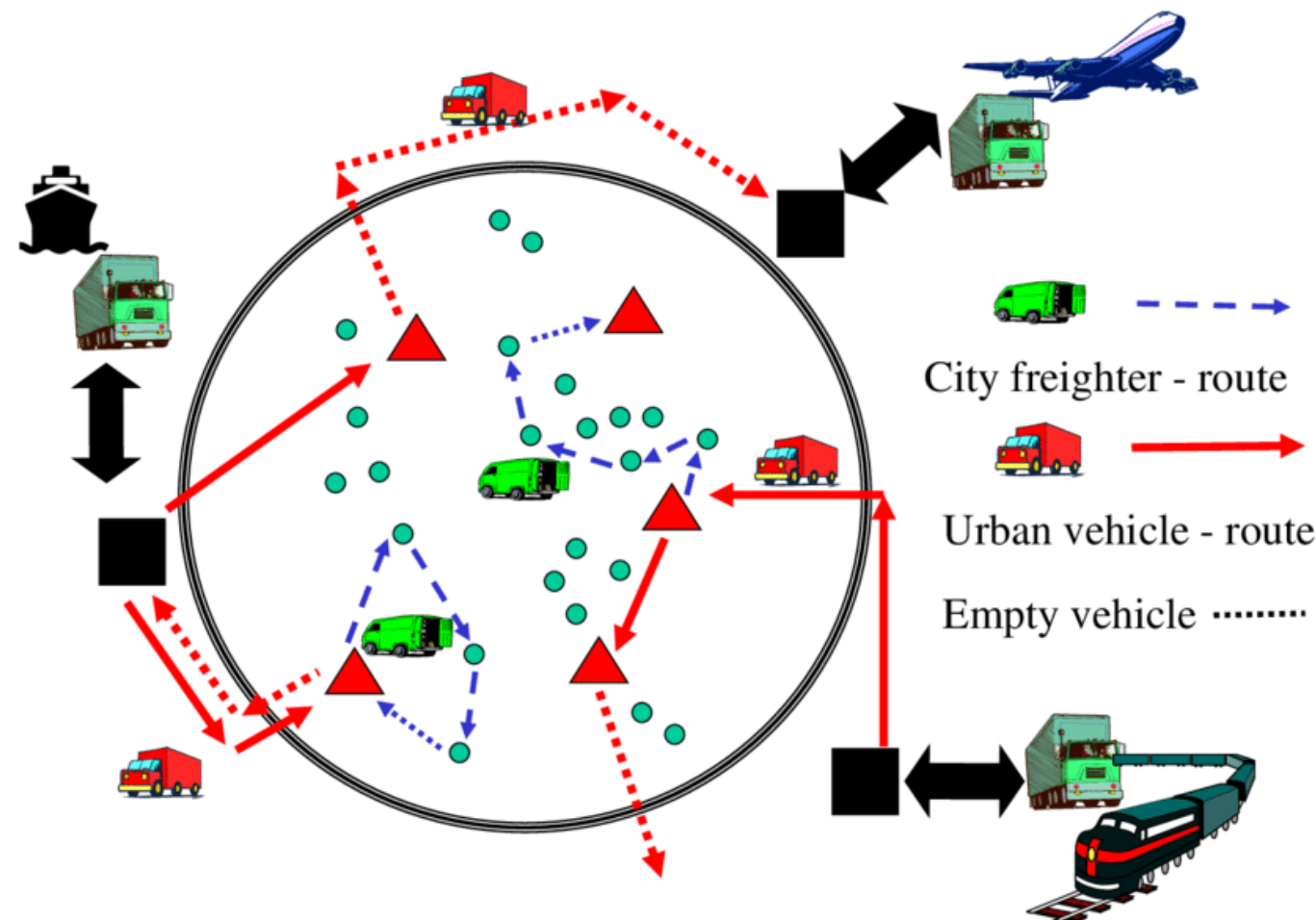
Concept, Stakeholders, Challenges

Urban Logistics – Spatial Perspective

**Urban Logistics = Last 50 miles
+ Last Mile + Last 50 Feet**

- External zones in sub-urban areas (e.g. ports, distribution centres)
- Satellite facilities in urban areas (e.g. urban consolidation centres, local depots)

A Two-tiered City Logistics System



Source: Crainic, T.G., Errico, F., Rei, W. and Ricciardi, N., 2016. Modeling demand uncertainty in two-tier city logistics tactical planning. *Transportation Science*, 50(2), pp.559-578.

Urban Logistics – Supply Chain Perspective

Urban Logistics Activities:

- Delivery of goods (business and home);
- Service transport and demolition traffic;
- Service vans for maintenance, supply and removal of parts;
- Reverse logistics for waste removal and for returns management;
- Shopping trips made by private households.




Source: World Economic Forum & Accenture (2009)

Stakeholders in Urban Logistics

*Difficult to organise, difficult to modernise, difficult to **decarbonise**.*

Public Stakeholders

- Central Government
- Local authorities
- Trade associations
- NGOs
- Commercial organisations
- Public Transport operators
- Citizens

- 
- No completely shared interest for any given measure among stakeholders;
 - Little cooperation and interaction between various stakeholders;
 - The local authority lacks awareness, knowledge, and statistics insights about freight transport activities in the city.

Private Stakeholders

- Shipper/ Receiver
 - Logistics service providers
- Freight operators
 - Consumers
- Vehicle Manufacturers/
Original equipment
manufacturers
- Land/ property owners

Urban Logistics Challenges



Public Stakeholders Perspective

Land Use and Streetscape

- Urban deliveries lack coordination;
- Drivers 'circling' - looking for a space to park;
- Unpermitted parking and (un)loading: e.g. on double yellow lines, bike lanes or double parking; causing blockages, interrupting flow.

Congestion

- Dublin - Second most congested city in Europe (246 hrs/yr).

- **Air Quality**
- **GHGs emissions**
- **Road Safety**
- **Lack of statistics insights about freight transport activities in the city.**

Industry Stakeholders Perspective

Our cities are not optimised to cope with new logistics usages

- Limited parking space;
- Limited and expensive logistics infrastructures/space for the cargo loading, and consolidation;
- Tight delivery time windows;
- Traffic conditions in city centres.

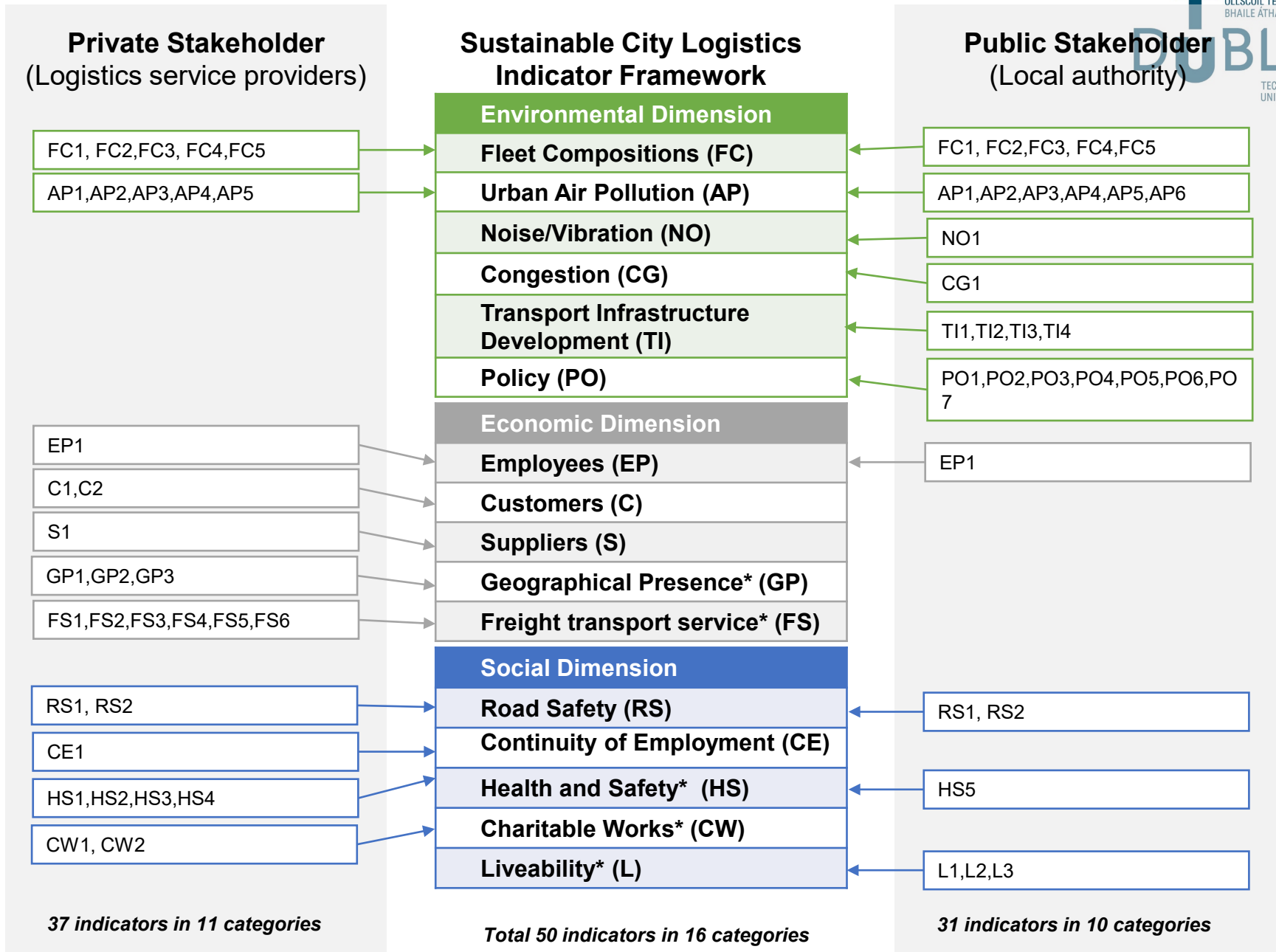
Lack of policy support

- The land and transport spatial planning in the city largely prioritise passenger transport over freight transport;
- Facing strict restrictions on access regulations and vehicle standards.
- **The majority operators lack of ability to report their sustainability performance.**

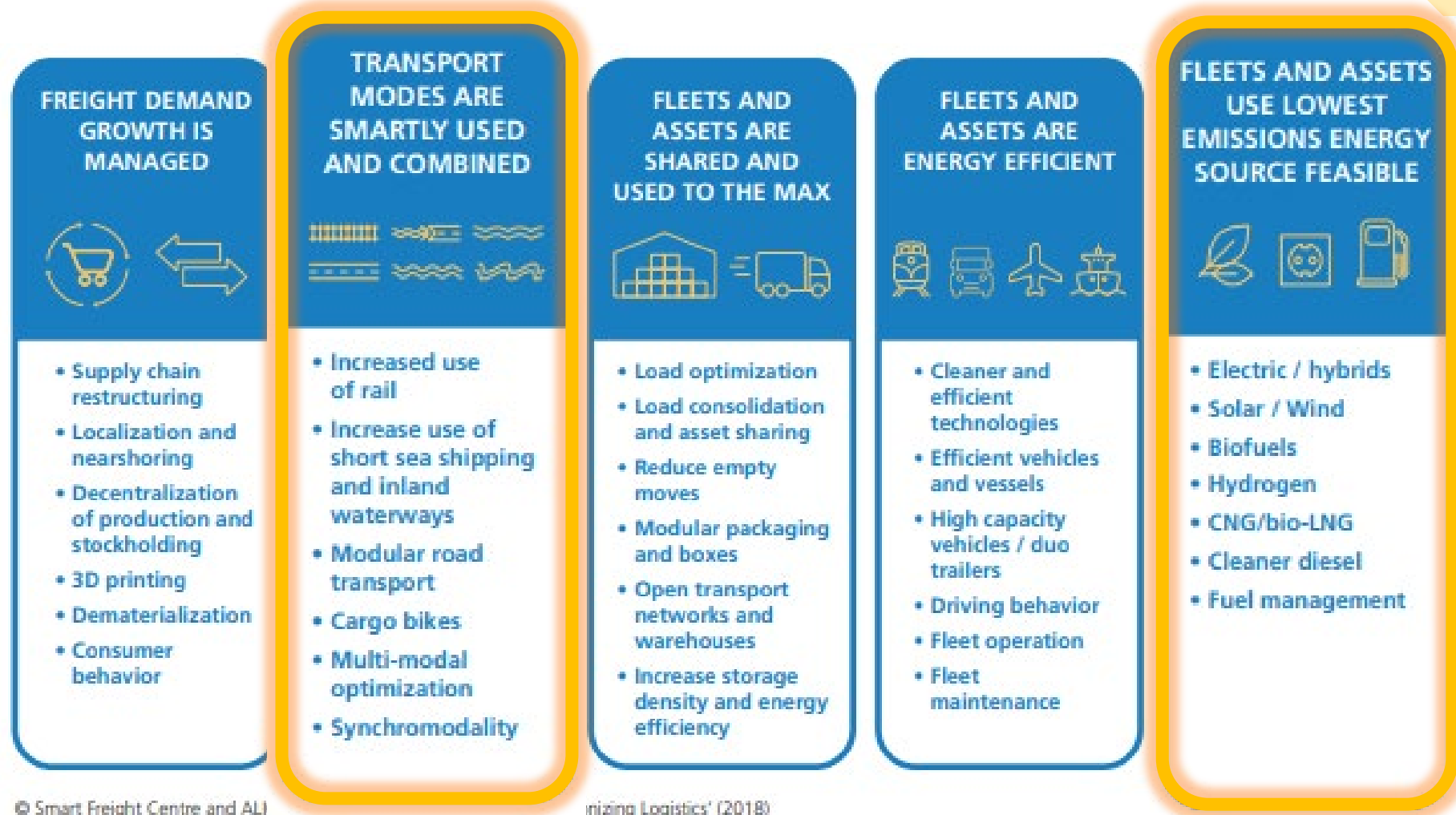
A framework for measuring sustainability performance in city logistics

- Developed based on the Global Reporting Initiative (GRI) Framework;
- Indicators identified in literature and CSR reports;
- Define>Design> Develop> Deploy

To know more about my on-going research: <https://forms.office.com/r/uGAib7RVLM>



Part II: Urban logistics decarbonisation practices in Ireland



Urban logistics decarbonisation practices in Ireland – DPD Ireland

- Sources:

- <https://www.seai.ie/case-studies/dpd-electric-fleet/>

- <https://dpd.ie/About-DPD/Corporate-Social-Responsibility>

- Pictures:

- <https://www.parcelandpostaltechnologyinternational.com/features/dpd-ireland-makes-big-investments-in-technology-and-people-following-record-growth.html>

- <https://www.parcelandpostaltechnologyinternational.com/news/delivery/dpd-invests-in-electrification-of-irish-vehicle-fleet.html>



Urban logistics decarbonisation practices in Ireland - An Post



Sources:

<https://www.cgbusinessconsulting.com/an-post-aims-for-zero-emission-postal-deliveries-by-2030/>

<https://www.anpost.com/Media-Centre/News/An-Post-joins-global-EV100-to-accelerate-next-gene>

<https://www.anpost.com/Sustainability/Our-Approach/Our-Commitment>

<https://www.anpost.com/Sustainability/Our-Approach/2020-Achievements>

Urban logistics decarbonisation practices in Ireland

Sources:

<https://smartdublin.ie/trialling-and-testing-innovative-solutions-to-last-mile-delivery-challenges-in-dublin/>

<https://fernhay.com/our-products/eWalker>

<https://irishtechnews.ie/ups-and-dublin-city-council-to-reinvent-deliveries/>



LAST MILE DELIVERY

THE SMART SOLUTION TO OPTIMISE DELIVERIES

CHANGE:
IMPROVING
DELIVERIES THROUGH
SMART
TECHNICS



REDUCE GOV
VEHICLES IN
URBAN CENTRES

SUPPORTING
LOGISTIC REQUIREMENTS

REDUCE EMISSIONS
AND CONGESTION

APPLY HERE: WWW

100% IN FUNDING
AVAILABLE



Other decarbonisation projects in Ireland



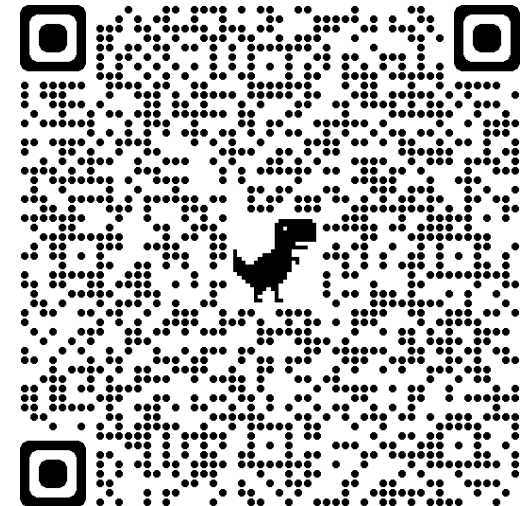
Takeaways from examples

- ✓ Initiatives focus on retail urban logistics activities, and mail and parcel deliveries,
- ✓ Most initiatives focus on last mile deliveries by LGV or cargo bikes in the city,
- ✓ Small scale implementation,
- ✓ Mostly private initiatives of single players with limited or mediated collaboration - but no multiuser facilities

Gaps & Opportunities

- ✓ How to reduce trips of HGVs to/from the city
- ✓ Solutions for the last 50 miles
- ✓ Utilisation of learning and change management approaches from large organisations for smaller players
- ✓ Consumer engagement

What's the size of your
next-day delivery's
carbon footprint?



Stakeholders	Public sector Central/Local Government/Transport Planning	Private sector	Consumers & Civil Society	R&D & support from academia
Solutions				
Reporting standardisation – data availability/access	●	●		○
Investment in ICT & physical infrastructure	●			○
Encourage uptake of clean fuel vehicles	●	●	○	○
Education, Awareness and soft branding	●	●	●	●



Multi-Cross stakeholder
dialogue

Way Forward - Freight Partnerships

- **Freight partnerships** have been shown to be an important part of addressing urban logistics and freight transport problems.
 - A freight partnership is a **long-term partnership between freight stakeholders**, that on a **formal or informal** basis meet regularly to seek solutions to problems and discuss concerns.
 - **Most partnerships do not receive any funding**, while in other cases some partnerships have received funding through a project.

Other stakeholder engagement options

- Business-led stakeholder engagement - **Business Improvement Districts (BID)** type organisations. E.g. BIDs in Central London.
- Private sector '**Living lab**' approach refers to a local experimental project of a participatory nature. 'Real life' setting; Multiple stakeholders.



Thank you for your attention

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